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Antibacterial effects and genotoxicity of new derivatives of furanones

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Abstract

New chlorine-containing furanones were tested for the presence of antibacterial activity and also for genotoxicity in Ames test. It has been established that the tested compounds had antibacterial properties. Antibacterial activities of all four compounds differed in rich broth and minimal glucose media. While in rich broth the minimal inhibitory concentration (MIC) of the compounds varied from 150 to 600 mcg /ml, then in the minimal glucose solution (MIC=0.75 mcg/ml) the activity of compounds were significantly increased. The estimation of genotoxicity of the tested compounds has revealed a weak mutagenic activity for two compounds. Other compounds were not mutagenic. The role of furanones structure in genotoxicity is discussed. © IDOSI Publications, 2012.

Keywords

Antibiotics, Furanone, Genotoxicity, Salmonella